

**ROLLOVER ACCIDENT BATTLE DRILL: UPARMORED HMMWV**

**TASK:** React to a Vehicle Rollover (19-5-D0013)

**TASK STEPS AND PERFORMANCE MEASURES:**

- 1. Rollover procedures for Up Armored HMMWV vehicles.
    - a. The driver--
      - (1) Releases the accelerator.
      - (2) Keeps his hands on the steering wheel and braces for an impact.
      - (3) Yells, "Rollover."
  - NOTE: The driver and the vehicle commander should be wearing seat belts.**
    - (4) If time permits, shuts down the engine.
  - b. The gunner--
    - (1) Drops down from the hatch into the vehicle.
    - (2) Holds onto a stationary object.
    - (3) Yells, "Rollover."
- NOTE: If possible, the vehicle commander grabs the gunner's legs to assist him into the vehicle.**
- 2. After the rollover has been completed--
    - a. The driver--
      - (1) Shuts down the engine.
      - (2) Activates the fixed fire extinguisher, if available.
      - (3) Disconnects the microphone plug, if available.
      - (4) Checks for injuries and seeks medical attention, as needed.
      - (5) Exits the vehicle.
      - (6) Checks for fuel spills and attempts to contain them, if possible.
    - b. The vehicle commander--
      - (1) Checks the crew for injuries and seeks medical attention, as needed.
      - (2) Disconnects the microphone plug, if available.
      - (3) Exits the vehicle with the crew.
      - (4) Accounts for personnel and sensitive items.
      - (5) Checks for fuel spills and attempts to contain them, if possible.
      - (6) Reports to higher headquarters.
      - (7) Seeks recovery of assets.
    - c. The gunner--
      - (1) Clears the weapons.
      - (2) Checks the weapons' serviceability.

**WARNING**

**Never attempt to leap from a rolling vehicle. It may roll over you. Ensure that the vehicle has stopped its roll before moving. Upon complete evacuation of all personnel, vehicle should be inspected for fire hazards such as leaking oil, fuel, and hydraulic fluid. Use the portable fire extinguisher when inspecting vehicle for leaks in case of fire, which could cause injury or death. If hazardous/explosive materials are involved, driver should take actions according to the DD Form 836 accompanying load. Notify emergency response personnel and remain at evacuation distance while securing accident scene.**

**PREVENTIVE MEASURES**

**Driver Training.** Start by training your drivers in the six important factors that can affect vehicle stability. These six factors are:

(1) *Vehicle Center of Gravity.* The height of a vehicle's center of gravity and the length of the wheelbase determine the vehicle's stability.

(2) *Load Security.* Improperly secured loads can change a vehicle's center of gravity and its stability. Bulk tank trucks are inherently less secure because fluids can surge when trucks brake or go around curves, thereby altering the center of gravity. Also, a vehicle loaded with containers will have a higher center of gravity. Additionally, it is important that payloads are secured as closely as possible to the lateral centerline of the truck or trailer bed. If the payload is not centered properly, the vehicle stability will not be equivalent when turning to both the right and left. See Figures: 1-1, and 1-2.

(3) *Radius of Curves and Slope of Roadways.* These are important because they generate a centrifugal force that acts sideways on the vehicle, thereby decreasing vehicle stability.

(4) *Vehicle Speed.* This is probably the most important factor contributing to vehicle instability because it magnifies problems presented by the other three factors. As the vehicle's speed increases, the centrifugal force, or sideways force increases. Faster speeds also result in decreased driver response times. Speed is the factor over which the driver can exercise the most control. When maneuvering through curves or sudden traffic situations, a vehicle with a high center of gravity can easily turn over. Speed is even more important when the movement of the liquid is "in phase" with the vehicle's maneuver. If the liquid is on one side during the first curve, then shifts to the other side during the next curve, the liquid is positioned to shift back to the first side with four times the side force it had during the initial curve. Sudden vehicle maneuvers are especially risky because the combination of speed and load shift makes the vehicle unstable.

(5) *Trailer Towing.* Vehicles towing trailers are much more prone to roll over, especially in curves and during sudden steering maneuvers, as a result of the exaggerated motion of the trailer.

(6) *Vehicle Condition and Preparation.* It is critical the vehicle is in good operating condition before starting your mission, with particular attention paid to the tires' condition and air pressure. Properly performed PMCS is the best way to control this potential hazard.